

Amendments to the Specification:

Please replace the Title with the following:

Method for Controlling Outer Loop Power in a WCDMA System

In page 1, please replace paragraph 1 with the following amended paragraph:

The invention relates to a method for controlling the reverse link power in the ~~W-CDMA~~ WCDMA, in particular to a method for controlling outer loop power therein.

In page 1, please replace paragraph 4 with the following amended paragraph:

The reverse link power control of the ~~W-CDMA~~ WCDMA system includes three aspects: open loop power control, close loop power control and outer loop power control. The open loop power control is used to determine the initial transmission power of the mobile station. The close loop power control, as a main part of the reverse link power control, effects throughout the period in which the communication traffic exists, so as to overcome the fast fading on a radio propagation path. The outer loop power control, as a subsidiary of the close loop power control, adjusts the SNR threshold used in close loop power control according to the quality of the received reverse link signal, so that the power control is directly associated with communication quality instead of merely the improvement of the SNR.

In page 3, please replace paragraph 1 with the following amended paragraph:

An object of the invention is to provide a method for controlling outer loop power in ~~W-CDMA~~ WCDMA system. More particularly, the invention provides a method to adaptively adjust a SNR threshold used for closed loop power control in a base station using fuzzy control theory so as to meet BER requirements of the link according to a comparison result between a measured BER and a given BER in the base station.

In page 3 , please replace paragraph 2 with the following amended paragraph:

The method for controlling outer loop power in ~~W-CDMA~~ WCDMA system according to the invention comprises the following steps of:

In page 3 please replace paragraph 8 with the following amended paragraph:

Fig. 1 is a block diagram of a power controlling process in a ~~W-CDMA~~ WCDMA wireless communication system;

In page 3 please replace paragraph 10 with the following amended paragraph:

Fig. 3 is a flow chart of the outer loop power control method in the ~~W-CDMA~~ WCDMA wireless communication system according to the invention;

In page 3 please replace paragraph 13 with the following amended paragraph:

Fig. 6 is a SNR threshold recorded by a method in the paper an article entitled "An Uplink Power Control Scheme in CDMA Mobile Communication System"~~algorithm for a reverse power control method in CDMA system~~;

In page 4 please replace the second full paragraph with the following amended paragraph:

Fig. 8 is a comparison diagram between the uplink receiving SNR mean and BER measured by a base station of another embodiment of the invention and the uplink receive SNR mean and BER measured by the method according to the article paper titled "a algorithm for a reverse power control method in CDMA system"~~An Uplink Power Control Scheme in CDMA Mobile Communication System~~".

In page 4, please replace the fourth full paragraph with the following amended paragraph:

Fig. 1 shows a block diagram of a power control process of a ~~W-CDMA~~ WCDMA wireless communication system. As shown in Fig. 1, the ~~W-CDMA~~ WCDMA wireless communication system includes a base station controller 100, a base station 110, and a subscriber terminal 120. In the scheme shown in Fig. 1, the base station controller 100 is connected to the base station 110, and the subscriber terminal 120 is also connected to the base station 110. The subscriber terminal 120 moves within various cells of the system at variable speed.

In page 9, please replace the first full paragraph with the following amended paragraph:

Fig. 6 is the SNR threshold recorded by the method according to the thesis paper entitled "a reverse power control algorithm of CDMA system"~~An Uplink Power Control Scheme in CDMA Mobile Communication System~~", in a condition that the BER threshold is 10^{-3} , and the moving

speed of the subscriber terminal is 120 km/h. As shown in the Fig. 6, according to the method disclosed in the thesis, the adjustment of the SNR threshold is over frequent and changing amplitude is rather large, which will certainly influence system capacity.

In page 9, please replace the second full paragraph with the following amended paragraph:

Fig. 7 is the SNR threshold recorded by the base station controller 100 of the preferred embodiment of the invention, in a condition that the BER threshold is 10^{-3} , and the moving speed of the subscriber terminal is 120 km/h. In contrast to Fig. 6, the adjust frequency to the SNR threshold by the method of the invention is lower than that of the ~~thesis paper entitled "An Uplink Power Control Scheme in CDMA Mobile Communication System"~~ thesis paper entitled "An Uplink Power Control Scheme in CDMA Mobile Communication System" ~~a reverse power control algorithm of CDMA system~~, and the changing amplitude is smaller, which appropriately shows that the outer loop power control is an efficient means for the control of long-term quality control means of the radio link.

In page 9 please replace the third full paragraph with the following amended paragraph:

Fig. 8 is a comparison diagram of the uplink received SNR mean value and BER measured by the base station 110 of the preferred embodiment of the invention and the uplink received SNR mean value and BER measured by the method according to the ~~thesis paper entitled "An Uplink Power Control Scheme in CDMA Mobile Communication System"~~ thesis paper entitled "An Uplink Power Control Scheme in CDMA Mobile Communication System" ~~a reverse power control algorithm of CDMA system~~, in a condition that the BER threshold is 10^{-3} , and the moving speed of the subscriber terminal is 120 km/h. Under totally equivalent radio propagation environment, compared with the method of the ~~thesis paper entitled "a reverse power control algorithm of CDMA system"~~ thesis paper entitled "An Uplink Power Control Scheme in CDMA Mobile Communication System", the preferred embodiment of the invention obtains lower received BER with lower received SNR mean value, in another word, makes the subscriber terminal obtaining lower received BER with lower and more reliable transmission power, which shows that the invention has an obviously composed performance than the method of the ~~thesis paper entitled "a reverse power control algorithm of CDMA system"~~ thesis paper entitled "An Uplink Power Control Scheme in CDMA Mobile Communication System".

Please replace the Abstract with the following amended Abstract:

The invention discloses a method for controlling outer loop power in ~~W-CDMA~~ WCDMA system, which includes the following steps of: a) measuring a BER, and calculating an error between measured BER and a target BER and a change of the error; b) determining a degree of the error and a degree of the change of the error; c) calculating a degree of a SNR threshold adjusting step in accordance with the degree of the error and the degree of the change of the error; d) determining an actual SNR threshold adjusting step based on the calculated degree of the SNR threshold adjusting step; and e) adjusting a SNR threshold in accordance with the actual SNR threshold adjusting step. The invention bypasses the determination and implementation of the corresponding function relations between the SNR threshold and the measured BER value by using a fuzzy control method, which is capable of implementing adaptive real-time trace, thereby improves control quality.